

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:


Listing of Claims

1-5. (Canceled)

6. (Currently Amended) A wet-oxidation treatment apparatus for treating waste water, comprising:

a packed bed of a solid catalyst and/or a solid adsorbent provided in the apparatus;
a liquid inlet provided in the apparatus below the packed bed and connected to a source of the waste water;

a liquid outlet which is provided in the apparatus above the packed bed and through which treated waste water is discharged from the apparatus; and

 a water-permeable pressure layer provided on an upper surface of the packed bed and having a load enough to suppress a movement of the solid catalyst and/or the solid adsorbent, the water-permeable pressure layer being deformable according to a deformation of the upper surface of the packed bed,

wherein the water-permeable pressure layer is a substance having a plurality of rigid ~~metal~~ particles selected from the group consisting of stainless steel, titania and zirconia ~~titanium and zirconium~~.

7. (Currently Amended) The apparatus according to claim 6, wherein each of the rigid particles ~~particle~~ has an average diameter of 3 to 30 mm.

8. (Previously Presented) The apparatus according to claim 6, further comprising:
a vertical partition forms the respective segments each having a cross-sectional area of 50 to 5000 cm².

9. (Previously Presented) The apparatus according to claim 6, further comprising:

a vertical partition having a height of 20 to 300 cm in a vertical direction.

10. (Previously Presented) An apparatus according to claim 6, further comprising:
a layer provided under the packed bed and above the liquid inlet and configured to disperse an upward stream of the waste water and/or a waste gas introduced through the liquid inlet into the apparatus.

11-13. (Canceled)

14. (Currently Amended) The apparatus according to claim 6, wherein each of the rigid particles ~~rigid metallic~~ has an average diameter of 3 to 30 mm.

15. (Currently Amended) A wet-oxidation treatment apparatus for treating waste water, comprising:

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a packed bed of a solid catalyst and/or a solid adsorbent provided in the apparatus;

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a liquid inlet provided in the apparatus below the packed bed and connected to a source of the waste water;

a liquid outlet which is provided in the apparatus above the packed bed and through which treated waste water is discharged from the apparatus; and

a layer provided under the packed bed and above the liquid inlet and configured to disperse an upward stream of the waste water and/or a waste gas introduced through the liquid inlet into the apparatus,

wherein the layer is a substance having a plurality of rigid ~~metallic~~ particles selected from the group consisting of stainless steel, titanium and zirconia ~~titanium and zirconium~~.

16-18. (Canceled)

19. (Currently Amended) An apparatus according to claim 15, wherein each ~~one~~ of the rigid ~~metallic particles or ceramic~~ particles has an average diameter of 3 to 30 mm.

20-38. (Canceled)

39. (Previously Presented) The apparatus according to claim 6, further comprising:

a vertical partition configured to divide a boundary area between an upper part of the packed bed and the pressure layer into a plurality of respective segments formed in a vertical direction.

40. (Previously Presented) The apparatus according to claim 10, further comprising:
a vertical partition configured to divide a boundary area between an upper part of the packed bed and the pressure layer into a plurality of respective segments formed in a vertical direction.

41. (Previously Presented) The apparatus according to claim 40, wherein the respective segments formed by the vertical partition have a cross-sectional area of 50 to 5000 cm².

42. (Previously Presented) The apparatus according to claim 40, wherein the vertical partition has a height of 20 to 300 cm in a vertical direction.

43. (Currently Amended) A wet-oxidation treatment apparatus for treating waste water, comprising:

a container;

a packed bed of a solid catalyst and/or a solid adsorbent provided in the container;

a liquid inlet provided in the container below the packed bed and connected to a source of the waste water;

a liquid outlet which is provided in the container above the packed bed and through which treated waste water is discharged from the container; and

a water-permeable pressing layer provided on an upper surface of the packed bed and having a load enough to suppress a movement of the solid catalyst and/or the solid adsorbent, the water-permeable pressing layer being deformable according to a deformation of the upper surface of the packed bed and having a plurality of rigid ~~metal~~ particles.

44. (Currently Amended) A wet-oxidation treatment apparatus for treating waste water, comprising:

a container;

a packed bed of a solid catalyst and/or a solid adsorbent provided in the container;

a liquid inlet provided in the container below the packed bed and connected to a source of the waste water;

a liquid outlet which is provided in the container above the packed bed and through which treated waste water is discharged from the container; and

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cont. a layer which is provided under the packed bed and above the liquid inlet and which is configured to disperse an upward stream of the waste water introduced through the liquid inlet into the container, the layer having a plurality of rigid ~~metal~~ particles.

45. (Previously Presented) A wet-oxidation treatment apparatus according to claim 43, further comprising:

a layer which is provided under the packed bed and above the liquid inlet and which is configured to disperse an upward stream of the waste water introduced through the liquid inlet into the container, the layer having a plurality of rigid metal particles.
